December, 1954

THE CHEMIST

VOLUME XXXI NUMBER 12

DR. HORACE G. BYERS, ***Hon. AIC***
First President
THE AMERICAN INSTITUTE OF CHEMISTS
(*See Page* 459)

Important New Research Tools

For Your Development Programs:

Rare Earths

From Baker & Adamson

These are some of the Rare Earths Offered to Industry By B&A:

- Cerium Oxide, 99.8%
- Europium Oxide, 99.8% Min.
- Gadolinium Oxide, 99.8%
- Gadolinium Oxide, 98% Min.
- Gadolinium Chloride
- Gadolinium Nitrate
- Lanthanum Acetate
- Lanthanum Oxide, 99.9% Min.
- Lanthanum Oxide, 99% Min.
- Lanthanum Chloride
- Lanthanum Nitrate
- Neodymium Acetate
- Neodymium Oxide, 99.9% Min.
- Neodymium Oxide, 99% Min.
- Neodymium Chloride
- Neodymium Nitrate
- Praseodymium Oxide, 99.8% Min.
- Praseodymium Oxide, 98% Min.
- Praseodymium Chloride
- Praseodymium Nitrate
- Samarium Oxide, 99.9% Min.
- Samarium Oxide, 99% Min.
- Samarium Chloride
- Samarium Nitrate
- Scandium Oxide, 99.8% Min.
- Ytterbium Oxide, 99.8% Min.
- Yttrium Oxide, 99.8% Min.
- Yttrium Oxide, 99% Min.
- Yttrium Chloride
- Yttrium Nitrate

Important new additions to Baker & Adamson's extensive line of reagents and research chemicals are the Rare Earths. Increasingly, these special reagents are finding applications in new experimental techniques, and for product development programs in many fields.

Some of the more immediate and important potential applications include use of Rare Earths as catalysts, in development of analytical and spectrographic standards, in electronics for development of phosphors, in glass and ceramics, and in metal alloys.

In addition to those listed, other B&A Rare Earths are available on request. Remember—B&A is geared to supply your needs in any quantities from experimental to commercial lots. For further information on B&A Rare Earths, write or phone any General Chemical office listed below.

BAKER & ADAMSON® *Reagents and Fine Chemicals*

GENERAL CHEMICAL DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 Rector Street, New York 6, N. Y.

Offices: Albany • Atlanta • Baltimore • Birmingham • Boston • Bridgeport • Buffalo • Charlotte • Chicago • Cleveland • Denver • Detroit • Houston • Jacksonville • Kalamazoo • Los Angeles • Minneapolis • New York • Philadelphia • Pittsburgh • Providence • St. Louis • San Francisco • Seattle • Kennewick and Yakima (Wash.)

In Wisconsin: General Chemical Company, Inc., Milwaukee

In Canada: The Nichols Chemical Company, Limited • Montreal • Toronto • Vancouver

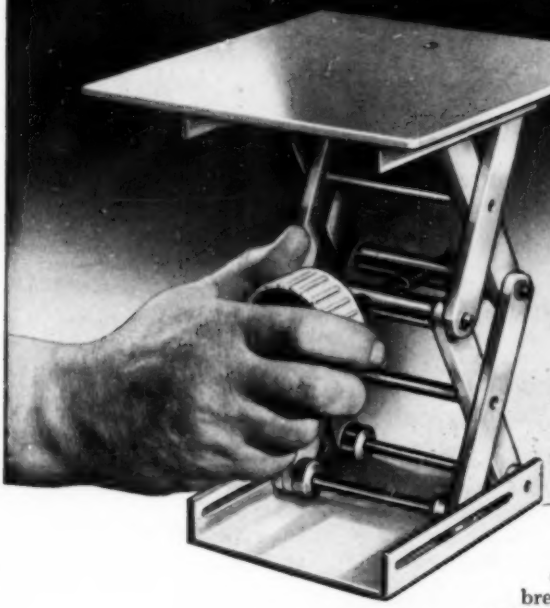
SETTING THE PACE IN CHEMICAL PURITY SINCE 1882

REAGENTS B&A STANDARD OF PURITY FINE CHEMICALS

Easy does it...

AND QUICKLY

LAB-JACK



Want to simplify your precision set-ups . . . prevent breakage of glassware . . . save valuable research time?

The new Cenco-Lerner Lab-Jack is an all-purpose, general utility support that is quickly adjustable through an elevation range of about 7 inches. Its smooth, fast operation makes it particularly useful in isotope research where precision set-ups are required and it offers worthwhile advantages when used for supporting hot plates, oil baths, large Dewar flasks, ground-joint glassware, receivers, etc.

No. 19089...$33.00

The Lab-Jack is made of stainless steel and aluminum with large plastics control knob. Top plate is 5½" x 4¾". Included also is a support rod and an 8" x 8" auxiliary top plate for use when a larger area is required.

Make a note now to include No. 19089 Lab-Jack on your next order. Meanwhile, write for descriptive circular No. 1213.

cenco

. . . one dependable source of supply for everything you need in scientific instruments and laboratory supplies. Over 15,000 items . . . 14 branch offices and warehouses.

CENTRAL SCIENTIFIC COMPANY

1706-F IRVING PARK ROAD • CHICAGO 13, ILLINOIS

CHICAGO NEWARK BOSTON WASHINGTON DETROIT SAN FRANCISCO
SANTA CLARA LOS ANGELES TORONTO MONTREAL VANCOUVER OTTAWA

REFINERY SUPPLY COMPANY

624 EAST FOURTH STREET • TULSA 3, OKLAHOMA
2215 McKINNEY AVENUE • HOUSTON 3, TEXAS

The CHEMIST

Reg. U. S. Pat. Off.

Publication of

THE AMERICAN INSTITUTE OF CHEMISTS, INC.

60 East 42nd Street, New York 17, N. Y.

Entered as second class matter April 8, 1936, at the Post Office at New York, N. Y., under Act of August 24, 1912. Issued monthly.
Subscription price, $2.00 a year to Members, $3.00 to Non-Members. Single copy, this issue, $0.25. Copyright, 1954 by THE AMERICAN INSTITUTE OF CHEMISTS, INC.

Volume XXXI | December, 1954 | Number 12

Editor: V. F. KIMBALL

Editorial Advisory Board

RAYMOND E. KIRK HILTON IRA JONES WALTER J. MURPHY

Contributing Editors

Lawrence H. Flett, National Aniline Div., Allied Chemical & Dye Corp., New York 6, N. Y.
D. H. Killeffer, 168 Westchester Ave., Tuckahoe 7, N. Y.
Dr. Frederick G. Sawyer, Ralph M. Parsons Co., 617 So .Olive St., Los Angeles, Calif.
Dr. Julian F. Smith, 201 Spring Ave., Takoma Park, Maryland
Florence E. Wall, Consultant, Writer, 210 East 68th Street, New York, N. Y.
Martin B. Williams, The Thomas Alabama Kaolin Co., Hackleburg, Alabama

Department Editors

Condensates, Dr. Ed. F. Degering • *AIC Activities*, C. P. Neidig
Chemical Books Abroad, Rudolph Seiden
Opportunities, Doris Eager

THE AMERICAN INSTITUTE OF CHEMISTS does not necessarily endorse any of the facts or opinions advanced in articles which appear in THE CHEMIST.

SCHEDULED FOR EARLY PUBLICATION

The Consultant's Organization, Dr. Foster D. Snell, F.A.I.C.
Sixteen Years of Chemical Education in China, Dr. Peter P. T. Sah
The Research Chemist in the Pharmaceutical and Medicinal Chemical Industries, Dr. Randolph T. Major, F.A.I.C.
Advice on the Submission of Inventions and Ideas to Large Corporations (a reprint), Marvin Small.
What Is a Fellow? Dr. Ernest H. S. Van Someren, F. Inst. P.
The Promising Field of Fluorochemicals, R. M. Adams
Award of Chicago Chapter Scroll to Dr. Harold Urey.
Award of Pennsylvania Chapter Scroll to Dr. Arthur Osol, F.A.I.C.
Award of Washington Chapter Honor Scroll to Dr. Eduard Farber, F.A.I.C.

IN THIS ISSUE

Editorial:

Would You Like to Increase Your Chances of Becoming President of the American Institute of Chemists? Dr. Donald B. Keyes 457

Life and Work of Horace Greeley Byers, Dr. Harlan L. Trumbull 459

Award of Honorary AIC Membership to Dr. Byers 462

AIC History to be Compiled 463

AIC Intervenes for New York Municipal Chemists 464

Professional Standards and Attitudes, Dr. W. E. Kuhn, F.A.I.C. 467

AIC to Confer Honorary Membership on Dr. Milton C. Whitaker 472

Council 473

AIC Activities 475

Will You Come 477

Opportunities 478

For Your Library 479

Condensates 486

Something New 487

TO COME IN JANUARY

The first issue of the New Year brings a variety of stimulating material. The presentation of the Chicago Chapter's Honor Scroll to Dr. Harold C. Urey will be featured. The New Jersey Chapter, which assisted Montclair State Teachers College to obtain a new science building, was present at the ground-breaking ceremonies; you will learn how this AIC Chapter effectively served its community. The New Year traditionally inspires predictions; a cluster of these may provoke interest. There will be other news and information of interest.

TO SERVE YOU

Robert S. Aries & Associates 475
Baker & Adamson ..... Inside Front Cover
J. T. Baker Chemical Co. 456
Bios Laboratories 481
Central Scientific Co. 453
Croll-Reynolds Co., Inc. 486
Evans Research & Development Corp. 485
Fisher Scientific Co. 458
Johns-Manville 465
O. Johnson & E. Scudder 482
Kewaunee Mfg. Co. ..... Inside Back Cover
The Lento Press 479
Molnar Labs. 483
Oldbury Electro-Chemical Co. 466
Phoenix Chemical Labs. 484
Robinette Research Labs. 478
Foster D. Snell, Inc. 476
R. Steckler Labs. 487
Truesdail Labs., Inc. 480
U.S. Stoneware ..... Outside Back Cover

BAKER CONTAINERS PROTECT PURITY

Baker chemicals are packaged in containers that safeguard quality—packages that are safe and convenient to use, store, and move from one point to another. Below you will see a few of the many recent improvements.

SAFETY-VENT CAP FOR HYDROGEN PEROXIDE

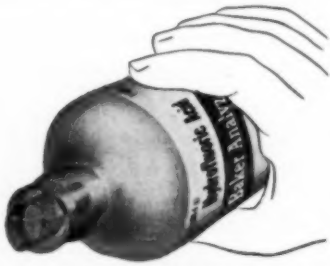
This 'Baker Analyzed' Reagent 30% is packaged in polyethylene bottle for protection of purity, light weight, and freedom from breakage. Outer sleeve protects from actinic light and provides stable base. Cap with a special safety-vent prevents build-up of excessive pressure.

POUR-SPOUT DRUMS FOR SOLVENTS

The 5-gallon containers for solvents are equipped with a special pour-spout, sealed inside for easy stacking. It is reversed quickly for convenient, drip-free pouring. A 'tamper-proof' seal safeguards the product.

POLYETHYLENE LINERS IN DRUMS

Fibre drums are strong, durable and light in weight. Clean polyethylene liners provide excellent protection against moisture and help prevent caking, dusting and sifting. Liners are inert, protect the product from contamination and provide for effective reclosure.



SAFE AND CONVENIENT FOR HF

It is easy to pour a drop at a time, or a steady flow, from this convenient screw-cap polyethylene container for Hydrofluoric Acid, 'Baker Analyzed' Reagent. Designed for maximum safety, a drain-back channel prevents droplets from remaining on the lip.

'Baker Analyzed' Reagents with the protective packaging are available at leading laboratory supply houses. J. T. Baker Chemical Co., Executive Offices, Phillipsburg, New Jersey.

Baker CHEMICAL

Baker Chemicals

REAGENT • FINE • INDUSTRIAL

EDITORIAL

Would You Like to Double Your Chances of Becoming President of the Institute?

Dr. D. B. Keyes

President, The American Institute of Chemists

OF COURSE you would!

For years it has been our custom, as prescribed in our Constitution, to elect a president (or president-elect) only once every *two* years.

At the latest meeting of the Board and Council, both groups agreed to recommend to you members a proposed change in the Constitution which will require the election of a president of the INSTITUTE every year.

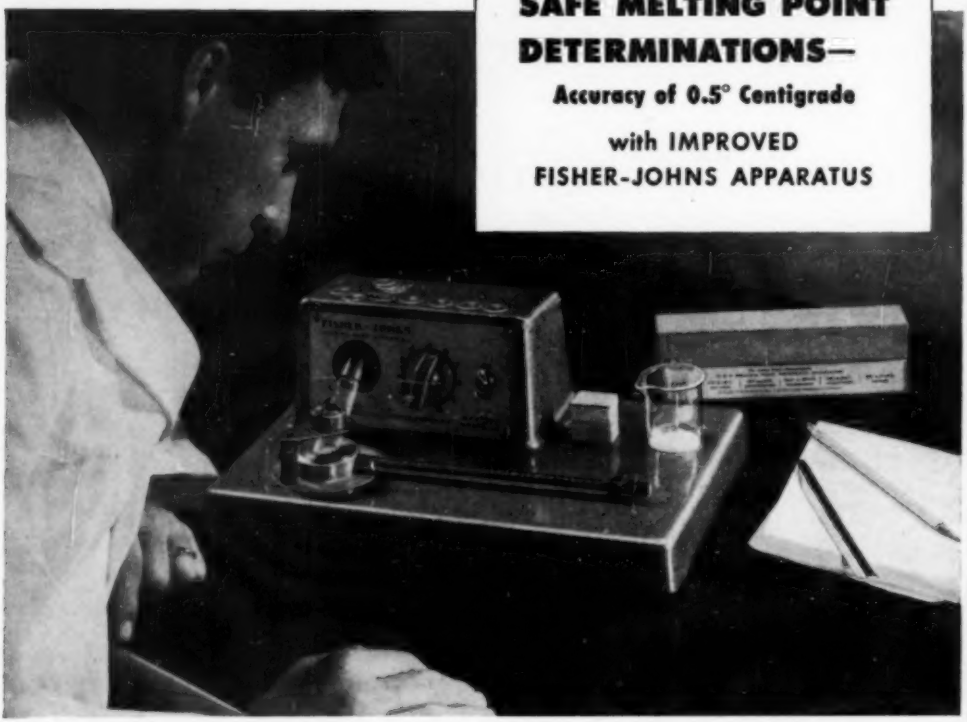
There is no reason why we should not elect a president-every year, as do all other scientific and engineering organizations of which I know. There are good reasons why we should. We have plenty of excellent presidential timbre among our members and we should give more of them this opportunity. Furthermore, our members seem to lose interest in the INSTITUTE soon after the election of the president. A few months after my election, one of my good friends asked what I had done to "revolutionize" the INSTITUTE. It is the individual members who will "revolutionize" the Institute, not its president. Cutting the time of membership lethargy from two to one year should change this attitude.

Your National Officers, your Board of Directors, and your Council wish you all a Very Pleasant Christmas and a Happy and Prosperous New Year!

SAFE MELTING POINT DETERMINATIONS—

Accuracy of 0.5° Centigrade

with IMPROVED FISHER-JOHNS APPARATUS



The new Fisher-Johns Apparatus is an improved model of the instrument which has been the universally accepted standard for melting point determinations for the past decade. It sets a new standard of accuracy, safety and simplicity. The entire apparatus (Powerstat control-unit, heating stage for measurements) is now in one neat, functionally designed casting. Controls have been simplified and the stage is illuminated. You merely place a few crystals of the sample between two small coverglasses and grind the crystals to a powder with a twist of the fingers. The aluminum heating-stage may be brought to the desired temperature as slowly as desired . . . or raised to 300°C in as little as 10 minutes.

Swinging the integral low-power lens into position, the analyst watches the crystals, now magnified to eye-comfort size. When the edges start to turn liquid, the thermometer projecting from the side of the stage gives him the beginning of the melting point range. A second thermometer reading is made as soon as the sample is all liquid, giving the full melting point range.

COMPLETE—READY TO USE

The new *improved* Fisher-Johns Apparatus comes with thermometer (20°-300°C), thermometer guard, stage magnifier, variable transformer (graduated in percent power input, permits rapid and continuous control of the heating rate) and box of 19 mm-diameter cover glasses.

Finished in durable gray Labtone.

Available for use on 115 volt 60 cycle a.c. only . . . $115.00.

May be used on 230 volt 60 cycle a.c. if line voltage is converted with a Fisher Voltage Changer . . . $9.25.

For further information, write to 717 Forbes St., Pittsburgh 19, Pa.

FISHER SCIENTIFIC

Boston	Chicago	Detroit	Philadelphia	St. Louis	Montreal
Buffalo	Cleveland	New York	Pittsburgh	Washington	Toronto

America's Largest Manufacturer-Distributor of Laboratory Appliances and Reagent Chemicals

Life and Work of Horace Greeley Byers*

Dr. Harlan L. Trumbull

P. O. Box 607, *Hudson, Ohio*

(Manuscript prepared by a long-time friend to commemorate the presentation of Honorary AIC membership to Dr. Byers, June 19, 1954.)

THE Shenango River Valley of western Pennsylvania, settled by Scotch-Irish pioneers, was the scene of fighting and bloodshed in the French and Indian War. Survivors among these early settlers were those who fought promptly in defense of their homes. Descendents of these sturdy people were to a large extent United Presbyterians, bred-in-the-bone defenders of principle. On a hill farm near Pulaski, Pa., Horace Greeley Byers was born December 26, 1872, the eleventh and youngest child of Ambrose and Mary McCracken Byers.

Horace attended No. 5 School in Pulaski Township until he was fifteen, when he entered the preparatory course at nearby Westminster College. Times were hard and money scarce, so he left school for two years, went to Kansas where he taught country school during the term, and broke prairie during vacation. The one crop of wheat he was able to put in failed entirely, it being a "dry year." His tales of dust storms and hail storms sound like entries for the Tall Stories Club.

He returned to Westminster and was graduated in 1895 to receive the A.B. and B.S. degrees with honors. At twenty-three, with no experience in college teaching, he secured a teaching job at Tarkio College, Missouri, on recommendation of his chemistry teacher, Prof. Thompson. At Tarkio he taught chemistry, physics, zoology, German, evolution, and teacher's arithmetic, served as secretary ot the faculty and librarian After leaving Tarkio he taught one semester at Westminster during the last illness of Prof. Thompson.

He enrolled in John Hopkins University, January 1897. While in the graduate school he was part-time instructor at the University of Maryland, and in his last year at Johns Hopkins was awarded a scholarship. His thesis, with Prof. Morse, treated of the behavior of oxidizable gases in solutions of permanganic acid, foreshadowing the principle of the Hop-calite gas mask of World War I for disposal of carbon monoxide. Dr. Byers still considers himself an inorganic chemist, although many of his researches have reached into other fields of science.

Following the award of the Ph.D. in chemistry, 1899, Dr. Byers went to Rock Hill, S.C., to teach during

* The writer has depended for many details upon a private manuscript prepared some years ago by Mrs. Byers and now treasured by her daughters. I am indebted to her for permission to use this document.

summer school. There he organized promptly the Fourth of July celebration, the first to be held in South Carolina after the War between the States. Shades of a patriotic fighting ancestry!

In the autumn of 1899, he went to the University of Washington as head of the Chemistry Department. There he remained for twenty eventful years, zealously devoting himself to the growth of that great institution. He organized and started the School of Pharmacy in 1899; offered the course in chemical engineering, 1904, which led to the award of the first B.S. degree in 1907. The Chemistry Department set the pace for the university, and was the first to award the Ph.D. degree, 1912. On his arrival in Seattle, he had one assistant and 75 students in chemistry. When he left, 1919, there was a chemistry faculty of 15 with 1200 students. Diligent in his profession, he taught at the University of Chicago, summer quarters 1901-1904. There he pursued the study of perchromic acid and its salts and matured it into his second important publication, jointly with Dr. E. Emmet Reid, 1904. His publications, including texbooks, exceed a hundred.

It was in Chicago, 1903, that he met, courted, and married Harriette Lane in a dynamic social whirlwind not lacking either zest or competition. She is the mother of their family of five daughters, all born in Seattle.

The academic year 1907-1908 found Prof. Byers on sabbatical leave in Leipsig, Germany, accompanied by Mrs. Byers, three daughters, and a devoted student, Sarah Kahan. At Leipsig he launched a new field of research, the passivity of metals, in collaboration with Prof. Max Leblanc. A dozen titles of studies in this field, 1908-1919, bear the name of Horace G. Byers, often in connection with students for the doctor's dissertation. New interpretations of the basic causes of passivity of iron, cobalt, and nickel are the objectives of most of these studies. Visits were made to leading laboratories to give Prof. Byers wide acquaintance with Europe's scientists and their workshops. This appraisal was needed to steer the growth of the Department of Chemistry at Washington, which was proving vigorous and rapid. Bagley Hall, erected and dedicated, 1909, on the campus in Seattle to house chemistry, pharmacy and chemical engineering, was the material result of this year abroad. The other results involving Prof. Byers, were a red beard, sworn hatred of the German Kaiser, and professionally, a tightening of his motto, "Keep everlastingly at it." He had financed the year abroad by optimistic faith in Seattle. A parcel of corner lots in which he invested hard-earned savings had trebeled in value in three months.

Fighting ancestry has an explosive influence on human affairs. These months before his fifth daughter was

born, Prof. Byers in 1917 volunteered his services in the 30th Regiment of U.S. Engineers slated shortly for gas warfare in overseas duty. He never had expected a transfer to American University where he remained in uniform as a scientist for the duration, and was disappointed not to have gone to the front. There he was engaged, as befitted his temperment, in the study of incendiaries. He retained his connection with the Chemical Warfare Service as a reserve officer until 1931 when he was retired as Lt. Colonel.

A turbulent period marked Prof. Byers' decision to leave Seattle and locate in the East in 1919. He held a brief appointment at the Bureau of Soils, Washington, D.C., ahead of his appointment to head the Chemistry Department at Cooper Union where he remained for nine years. These were rewarding years, busy with teaching, research, with consulting work in paper, paint, and rubber technology, and valiant aid in the organization of THE AMERICAN INSTITUE OF CHEMISTS. Patents growing out of work in this period pertain to catalysts, electrolytic reduction of CCl_4, and to accelerators and antioxidants for use with rubber. Jointly with Winfield Scott in U.S. Patent, 1,959,110 (May 15, 1934) 2, 4-diaminodiphenylamine is claimed as an antioxidant for rubber, the "Oxynone" of Rubber Service Division of Monsanto.

The published work of the scientist, Horace Byers, reveals that the most productive period came after his return to Government service, 1928, as head of the Division of the Chemistry and Physics of Soils, U.S. Department of Agriculture. By 1942, his name had appeared on 41 papers in the single field of the chemistry and physics of soils. In all, there were 76 publications in this period. To the delight of his spirit, he was now in the realm of inorganic chemistry, and especially to his liking was the involved riddle of selenium in soils. *Chemical Abstracts* lists 21 of his publications under the heading "Selenium." This work of Horace Byers was mentioned in the March, 1954, issue of THE CHEMIST (31,105).

Upon retirement from the Government service a dozen years ago, he greatly lamented that his services as a scientist were not in demand elsewhere. The culture of plants in greenhouse and garden was his sole occupation and he felt unemployed. Actually, he had impaired health, found it hard to relax and as time passed discovered that both his sight and hearing were failing. At present, regrettably, he is under constant medical care.

None of the achievements of Horace Byers outstrip his work as a teacher. In this field he helped hundreds of students to find themselves. I recall Prof. Byers entering a laboratory of bewildered freshmen in

1903, seating himself on a high stool, grasping his right knee with locked hands and precariously rocking as he talked to us. He would proceed not directly to answer questions that puzzled us. Rather, he suggested how we could get the answers for ourselves through experiment and verification. Thus he taught us how to respect and how to test the operation of natural laws. In this weird realm of sulfurous odors he reminded me of the mythological Vulcan, master of fire—fire which we neophytes badly needed to weld the axles of our rickety chariots. But it was we who did the job of mending axles. We learned to use the fire and thereafter our chariots were sturdier and ran better. Thanks, Vulcan!

Award of Honorary AIC Membership to Dr. Byers

BY UNANIMOUS acclaim at the Thirty-first Annual Meeting of THE AMERICAN INSTITUTE OF CHEMISTS, Honorary AIC Membership was awarded to Dr. Horace G. Byers, first president of the INSTITUTE, who, since his retirement from the U. S. Department of Agriculture, lives in Virginia.

Mrs. Byers replied to the letter of notification that her husband was gravely ill, but that "the awarding of an Honorary Membership in the INSTITUTE is the fulfillment of one of his dearest wishes. We tried to make him understand about it; and have been successful to a degree, but how much he understands, I have no way of knowing . . . You will readily see that he can attend no ceremony; but might I suggest the coveted certificate be awarded by mail; or that some interested friend bring it out here to him?"

Under the circumstances, the certificate of Honorary Membership was prepared and sent to AIC Councilor, C. C. Concannon, in Washington, D.C., to arrange presentation to Dr. Byers as quickly as possible. Mr. Concannon located Dr. W. O. Robinson, a friend and near neighbor of Dr. Byers, who with another friend, Dr. Holmes, presented the certificate to the family. Dr. Byers was in the hospital, too ill to receive visitors. Mrs. Byers graciously accepted the certificate and asked the delegates to express to THE AMERICAN INSTITUTE OF CHEMISTS, on behalf of Dr. Byers, his wife, and daughters, their deep appreciation of this signal honor. "We will treasure the certificate among our family keepsakes, because of his deep interest in the INSTITUTE and his considerable activity in its inception."

In the private manuscript referred to by the author of the previous article, Mrs. Byers has written that

her husband "is an omnivorous reader and has an unusual memory for facts but a poor one for names. Best of all writers he likes Sir Walter Scott and has read his novels over and over. Alexander Dumas is a close second in his affections; also, he has a weakness for detective stories. He is addicted to the *Saturday Evening Post* . . . He played tennis for years, until golf superseded it. But his greatest hobby all through the years, first, last, and all the time, is helping boys and girls who are trying to educate and support themselves. He feels that in so doing he is repaying Prof. Thompson of Westminster in some measure for his great kindness to a bewildered boy who was the beneficiary of his sympathetic wisdom and experience. And this tribute is due Dr. Byers: Never has he turned away from a friend or student who sought him for advice or financial aid; and his pride is that in every case, save only one, his helping hand has been justified."

As this issue goes to press, Dr. Byer's daughter, Mrs. W. J. Riker, of 102 Hillside Avenue, Englewood, N. J., informs us that her father seems to be a little better, though still seriously ill, and that her mother is taking a much needed rest.

The citation on the Certificate to Dr. Byers reads:

To Horace Greeley Byers

First president of THE AMERICAN INSTITUTE OF CHEMISTS *and vigorous proponent of professional progress, whose outstanding record as a teacher, as a chemical officer in World War I, and as a leader in agricultural research, he made his a lifetime of dedicated public service.*

AIC History to be Compiled

TO THE AMERICAN INSTITUE OF CHEMISTS:

IT IS BOTH fitting and timely that the nomination of Dr. Horace G. Byers, founder of THE AMERICAN INSTITUTE OF CHEMISTS, to Honorary Membership in the INSTITUTE prompted the suggestion that the full history of the AIC should be recorded in definitive form.

As outlined by Dr. Crossley — who, as our second president, has lived through most of the history of the INSTITUTE — about three years should be allowed for this project so that it may be done thoughtfully and thoroughly. A committee of long-time numbers has been appointed, to whom periods will be allotted, and it is hoped that the work will soon be actively in progress.

All members are asked to cooperate by sending to the committee any letters, records, and other items of

interest they may have which relate to the early days of the AIC. Either original documents or copies will be welcome, and if requested, anything so submitted will be copied and returned to the sender.

Each Chapter is asked to help by appointed a committee to assemble notes on its own history. In this way the participation of many additional members can be enlisted, thus ensuring that the story of the whole will be supported by stories of the development and activities of its component parts.

Please send all notes to the AIC office, 60 E. 42nd St., New York, 17, N. Y. marked to the attention of

AIC History Committee
—M. L. Crossley
Albert P. Sachs
John A. Steffens
Lloyd Van Doren
Florence E. Wall, *Chairman*

AIC Intervenes for New York Municipal Chemists

A HEARING was held, November 16th, before Joseph Schechter, personnel director and chairman of the Civil Service Commission of the City of New York, to discuss proposals in connection with scientific classifications.

The INSTITUTE was represented by Benjamin Janer, F.A.I.C., representing the Association of Municipal Chemists; by Karl M. Herstein, F.A.I.C., as chairman of the Committee on Professional Relations and Status of the American Chemical Society, New York Section, and by Dr. Donald B. Keyes, F.A.I.C., president of the INSTITUTE.

Mr. Janer presented a long discussion of the proposals in which carefully worked out criticisms were made of the salary schedules and of the qualifications requirements for Junior Chemists, and the suggestion that one new highest level of employment be explicitly stated.

Mr. Herstein stated that he had been in touch with the situation for the past year. Actually, it was his initiative last December which in considerable measure started the special study of chemical positions in the municipal service. He endorsed whole-heartedly the criticisms made by Mr. Janer, with special emphasis on the professional training required for a chemist and the necessity of adequate remuneration.

Dr. Keyes, speaking from the broader point of view of the general public, emphasized that the Civil Service can only function at the best professional level if conditions of employment are made so attractive that competent young people will join the Service and through years of training rise to the top of it.

"Wonder-worker" for the wonder drugs

How Celite filtration assures purity, speeds production

When producers of antibiotics sought a filter aid that would assure removal of all mycelium and other gelatinous impurities in the broth from which wonder drugs are extracted—and speed their "put-through" in the bargain—Celite ended the search.

The effectiveness of Celite can be attributed to these important factors which make it unique among filter aids:

Carefully processed from the purest deposit of diatomaceous silica known, Celite is available in nine standard grades—each designed to trap out suspended impurities of a given size and type. Whenever you reorder, you are assured of the same uniform, accurately graded powder received in your initial order. Thus, with Celite, you can count on consistent purity in your filtrates—at highest rate of flow—month after month, year after year.

The manufacture of wonder drugs is just one of the many processes in which consistent purity and faster filtration have been obtained through the use of Celite. Your own filtration problem, regardless of the product involved, can no doubt be solved with the proper grade of Johns-Manville filter aid. To have a Celite Filtration Engineer study your problem and offer recommendations, without cost or obligation, just write Johns-Manville, Box 60, New York 16, N. Y.

Celite is a registered Johns-Manville trade mark

JM PRODUCTS

Johns-Manville CELITE

FILTER AIDS

Honored: Dr. Ernest H. Volwiler, F.A.I.C., president of Abbott Laboratories, North Chicago, Ill., with the Chemical Industry Medal of the American Section of the Socity of Chemical Industry, at the Palmer House, Chicago, Ill., October 12th. He was honored for his important contributions to the development and manufacture of organic chemical products valuable in medicine. Dr. Roger Adams, Hon. AIC, introduced the medalist. Dr. Lauren B. Hitchcock, F.A.I.C., chairman of the Jury of Award and president of the Southern California Air Pollution Foundation, Los Angeles, Calif., presented the medal. Dr. Clifford F. Rassweiler, F.A.I.C., of Johns-Manville Corp., New York, honorary chairman of the American Section, presided.

Ceremonies: Marked the ground breaking for the new $6,000,000 chemical plant of General Aniline & Film Corp., at Calvert City, Ky., on Nov. 4th. The new plant, to be completed next year, will be the first installation in this country for commercial scale manufacture of chemical products developed from acetylene at elevated pressures.

Changed: The name of the Cooper Alloy Foundry Company of Hillside, N. J., to Cooper Alloy Corporation.

OLDBURY
1896 ®

PHOSPHORUS (Yellow or White)
PHOSPHORUS OXYCHLORIDE
PHOSPHORUS TRICHLORIDE
PHOSPHORUS PENTACHLORIDE
PHOSPHORUS PENTASULFIDE
PHOSPHORUS SESQUISULPHIDE
AMORPHOUS PHOSPHORUS
PHOSPHORIC ANHYDRIDE
PHOSPHORIC ACID
PHOSPHOROUS ACID
HYPOPHOSPHOROUS ACID
ALKYL ACID PHOSPHATES
(Alkyl Phosphoric Acids)
SODIUM CHLORATE
POTASSIUM CHLORATE
POTASSIUM PERCHLORATE
HYPOPHOSPHITES
OXALIC ACID
ZINC PHOSPHIDE

OLDBURY
ELECTRO-CHEMICAL COMPANY

Executive Offices:
NIAGARA FALLS, NEW YORK

Sales Office:
19 RECTOR ST., NEW YORK 6, N.Y.

Plants:
NIAGARA FALLS, N.Y.
COLUMBUS, MISS.

Professional Standards and Attitudes

Dr. W. E. Kuhn, F.A.I.C.

General Manager, Research and Technical Dept., The Texas Co., 135 E. 42nd St., New York 17, N. Y.

(Presented at the AIC Luncheon held in New York, N. Y., September 16, 1954)

IF TWO chemists meet, say over lunch and they are in a philosophical mood, the odds are that sooner or later they will lament the chemist's lack of public recognition.

They will, of course, agree that something ought to be done about it. Being of an era when all problems seem to be referred to legislation, they may feel that a resolution or a by-law—perhaps even a law—would provide the mechanism to acclaim.

I won't extend this hypothetical situation further; I am sure you get my point. We can dismiss the matter as a modest indulgence in self-pity—we are all guilty of such indulgence.

Rather, let us explore its implications in terms of professional standards and attitude. I intend to take a hard look at some of the implications involved here and to mark them out as danger signs along the route of growth and progress which our profession is now travelling.

Now let us go back to the lunching chemists. Is it true that the chemist does *not* enjoy considerable recognition and esteem today? In my opinion, the chemist has never been held in higher regard by the public. Keep in mind that the valuable work of the chemist is often obscured from the public. The gifts of chemistry most often come to the public through others.

> *A man's behavior is the embodiment of what he believes. It is a clear reflection of his professional attitude.*

For example, the "wonder drugs" are administered by the family doctor. Here the role of the chemist is hidden. Similarly, the "miracle fibers" reach the public through clothing salesmen. So, when one judges the prestige of the chemist, one must keep in mind the relative factor of the obscurity of his work. That is why I say that today the prestige of our profession is truly remarkable.

Quantitatively, I might cite the great volume of favorable publicity given our profession during the international conclaves here several years ago. You must have been as impressed as I was by the amount and generosity of comment in the public press which dramatized the role of chemistry and its contributions to the nation in war and peace.

The public news media both inform the public and reflect the opinions and

attitude of the public. The acclaim given chemistry in newspapers and magazines, on radio and television, and by the newsreels is a valuable measure of public esteem.

I would like to raise another question. Implicit in the hypothetical luncheon discussion was the feeling which burdens all such exchanges. That is the feeling that the public owes us prestige. Does the public owe us this great measure of recognition?

To be blunt: The public owes us nothing. Prestige follows upon a course of behavior which results in favorable public opinion. The key factor is action. The public accumulates a favorable opinion of you from performance. By-laws and resolutions are negative approaches to esteem. We must remember that people are not long fooled by high-sounding words. Performance alone makes a lasting impact on the public mind.

Now, let me highlight some aspects of the present-day performance of chemistry, the positive actions which have won public respect and attention.

Today the public is enjoying to an unusual degree the blessings of the chemists' ingenuity. On all sides life has been improved. I have already mentioned synthetic fibers and the new drugs—the one adding to human comfort, the other to physical well-being and longevity. Plastics have brought to the public a vast range of applications, for it is a highly flexible material. Food preserving techniques arriving from the chemist's laboratory have changed man's diet. His home is heated and his vehicles are powered on land, sea, and in the air, by a wide range of heat-energy fuels made commercial by chemistry. In food . . . clothing . . . and shelter . . . the chemist has made, and continues to make, valuable contributions to all man's basic physical needs.

What are the possibilities for further contributions? They are, as you know, practically unlimited. And what are the possibilities of adding to the public prestige of our profession? These too are unlimited. That is, if we continue to be guided by the critical fundamental which has underlain the great accomplishments of the past. Important chemical achievements have always been based upon a deep-seated respect for professional standards.

Today, increasing demands are being made upon the profession of chemistry. Industry needs chemists in great number. It is demanding chemical engineering and chemistry of a highly creative order. The two major industries in the field of chemistry, petroleum and chemicals, are spending record funds on research. In the past ten years, research expenditures in these industries have more than tripled. Together they do far more privately financed research than any other industry. More than ever, the chemist is conspicuously in the eye of the business man. There is an

enormous implied trust in the commitments of millions of dollars by business to the work of the chemist. The trust is based on professional standards. This is an opportunity and a challenge to us; individually and collectively.

Professional Perils

Now, I want to touch on a troubling aspect of the great opportunity ahead. In the hey-day of a new activity, of expanding enterprise, there are men of parasitic inclination who seek immediate gain and preferment at the expense of others. Through unethical practice and violation of professional standards they tear down the fine work that has been done by others — work done by conscientious and able individuals who choose to progress within the matrix of professional standards.

Let me be specific. There are some people who continue to compound inert materials of no value, which they foist upon the public with a barrage of exciting claims. Businessmen and the consuming public are taken in.

The reaction comes when the public seeks redress with the only instrument at its disposal, political action. The Federal Trade Commission issues a restraining order, or an investigation is started. Perhaps, public pressure may even shape new laws.

This is an oversimplified outline. However, it can serve as a guide to remind us that there are subsidiary results, beyond a restraining order which should deeply concern us in a case like this. First, there is a growth of public mistrust. Once again, chemistry has been made to serve some shoddy enterprise. No doubt, familiar phrases of chemistry were used to promote the useless material—phrases such as "laboratory tested," "amazing chemical formula," "bench-tested," and so on. All professional chemists share in the burden of damaged prestige which results.

Second, each such incident fortifies government control. Each time the public is cheated by such an enterprise, pressure grows proportionately for extension of government control. Not long ago the public was treated to a spectacle of wide ramification in which a battery additive was introduced to the market with specific claims presumed to have been backed by laboratory data. It took great time and effort to halt the damage growing out of that particular endeavor. I need not review the details in order to remind you that a Cabinet member was drawn into unwitting support of a material which, in the view of a committee of distinguished scientists, was accurately declared to be useless by the Bureau of Standards. This incident was unusually dramatic in that a high officer of the Federal government was drawn into it. The results were, therefore, even more damaging than is usual in such incidents to the prestige of the profes-

sional chemist. For the public has every right to assume that somewhere along the line a chemist compounded a worthless material and permitted it to be marketed under the guise of professional standards.

We should remind ourselves from time to time that no professional man has ever enjoyed as much prestige as the old family doctor. And we should remind ourselves that he did not gain such prestige, and devotion, by putting to one side his tradition of professional standards when confronted by the chance to engage in an unethical undertaking.

As some of you know, the business world was treated to another scandal not long ago which again revealed a fundamental disdain for professional standards. A new process was announced, at least promoted, for manufacture of ethylene glycol. A pilot plant was put into operation, a company was formed, and land was purchased. Then, a potential investor decided a critical survey of the process was in order. A well-known consulting firm was brought in. Its investigators found that there was hidden inside the so-called pilot unit a container of ethylene glycol which dripped when heated! A large nationally known company almost invested several million dollars in this fraudulent enterprise. A professional chemist has the right to be amused by P. T. Barnum's dictum that there is a sucker born every minute. He has, however, no right to be guided by it.

Since the end of World War II the equity market has been very sensitive to promotions centering on chemistry. The rapid growth of the petrochemical industry has enhanced the post-war glamor of chemicals as a Cinderella investment. Professional standards should serve to protect the unwary in matters of investment.

One more instance will dramatize sufficiently the effect of scouting ethical practices. Several years ago the newspapers here reported that several women had been badly burned by incendiary sweaters and that many women were in danger of becoming human pyres. The police moved quickly and seized unsold stocks. Shipments were traced to other cities. Tests of the yarn were made and by swift, coordinated action further disaster was headed off. The synthetic fibers in the yarn made the sweaters highly flammable. The public was instantly alert to possible dangers inhering in other synthetic fibers. It took a bit of explaining in the press to reassure the public that all "miracle fibers" are not incendiary. In this incident, human life was involved in a very dramatic way. Again, severe damage was done to the profession of chemistry. Again, someone, somewhere deliberately closed his eyes to professional standards in ever permitting such a material to be used for clothing.

All of us could counter my citations

with an impressive muster of incidents which would prove that, in the main, professional standards are well observed. And one could, for example, cite the millions of dollars spent by industry on quality control to protect the consumer again sub-standard products. However, my purpose is not to blame, nor is it to praise. Rather, I wish only to warn against abuse.

The Professional Creed

We are at the threshold of great endeavors. Chemistry is being called upon to deliver greatly of its ingenuity. At this time we should all review the objectives of THE AMERICAN INSTITUTE OF CHEMISTS: Three of those objectives are:

> To enhance the prestige and distinction of the profession and to extend its influence and usefulness.
>
> To cooperate with all agencies serving chemistry to make the profession of chemistry a powerful factor in the advancement of intellectual and material progress in the United States to the end that this nation shall assume its rightful place as a leader among the nations of the world in scientific thought and accomplishment.
>
> To support the work of the chemical societies in the education of the public to a better appreciation of the contribution.

Call these objectives a creed if you wish. The reputation of the profession of chemistry is dependent upon the philosophy expressed in them. Your reputation is above material measure. You cannot legislate it. You cannot buy it. You must earn it and, with it, you earn respect, *and the right to responsibility*.

We who have been in the profession for some time, especially those of us who organize and program scientific endeavors, know that it is the younger men who do the bulk of the creative or original work. We search for young men with aggressiveness, imagination, intellectual curiosity, and above all, optimism. From such traits come the progressive attitudes that advance our profession.

Now, how are we going to communicate the real meaning of standards to the younger men? Certainly not by written words alone, for words have various interpretations. Behavior, on the other hand, is continuing evidence of the real meaning of standards. A man's behavior is the embodiment of what he believes. It is a clear reflection of his professional attitude. That attitude, wherever it is exposed —in the academic world, at professional meetings, in business councils, in the industrial laboratory — effectively communicates to your fellow men the value you place upon professional standards.

Today our prestige is high. Prestige can be equated as the public's faith in our professional behavior. That faith must be earned anew each day, each month, each year. That is our challenge. Let us adhere at all times to the highest professional standards so that we may merit tomorrow the public faith we enjoy today.

AIC To Confer Honorary Membership on Dr. Milton C. Whitaker

A LOOK at the future of the chemical industry based on over half a century of experience in industry will be taken by Dr. Milton C. Whitaker, F.A.I.C., retired vice-president of American Cyanamid Company, when THE AMERICAN INSTITUE OF CHEMISTS confers honorary membership on him, January 20, 1955, at a dinner at the Hotel Commodore, New York, N. Y.

Dr. Whitaker, eighty-four, is still active as a consultant to American Cyanamid Company. His talk, entitled, "Watch Your Step", will contain some warnings to chemical industry in addition to predictions of things to come. He will speak in response to a citation to be presented by Dr. Donald B. Keyes, AIC president.

At the dinner, to be held in the East Ballroom of the Hotel Commodore, Dr. Wallace P. Cohoe will be honorary chairman; John Kotrady, chairman of the New York Chapter, will be toastmaster, and Dr. Robert C. Swain, vice-president of American Cyanamid Company, will introduce the honor recipient. A cocktail hour, at 6 p.m., sponsored by American Cyanamid Company, will precede the dinner, at which dress will be optional. Dinner tickets are $8.00, if reserved in advance with Shepherd Stigman, F.A.I.C., 29 West 15th Street, New York 11, N. Y. (WAtkins 4-8800). There will be a surcharge for tickets purchased at the door without a reservation. The dinner and meeting are open to all interested persons.

Dr. Whitaker's activities in the chemical world have not only spanned a long period, but have been distinguished by pioneering efforts in three different spheres of interest. Early in his career, when he was professor of chemical engineering at Columbia University, he pioneered in developing modern curricula in chemical engineering and helped convert chemical engineering into a science. During that same period, he was the editor of *Industrial and Engineering Chemistry* during its early, formative years, guiding that journal toward the prominent position it holds today.

After leaving the academic and editorial fields, Dr. Whitaker spent thirty years in the chemical industry, culminating in seventeen years as vice-president and director of American Cyanamid Company, before relinquishing his administrative responsibilities at the age of seventy-seven. During this third career, he pioneered in introducing research on a large scale into the chemical industry.

Dr. Whitaker has received many honors. Among them was the Perkin Medal, presented to him more than thirty years ago.

COUNCIL

OFFICERS

President, Donald B. Keyes
President-elect, Ray P. Dinsmore
Secretary, Lloyd Van Doren
Treasurer, Frederick A. Hessel

COUNCILORS

James B. Allison *New Jersey Chapter*
John R. Bowman, *At-Large*
Emmett B. Carmichael *Alabama Chapter*
Gustav Egloff, *Chicago Chapter*
Austin W. Fisher *New England Chapter*
Harry L. Fisher, *At-Large*
L. H. Flett, *Past President*
K. M. Herstein, *New York Chapter*
Harry N. Holmes, *At-Large*
H. O. Kauffmann, *Niagara Chapter*
Guy A. Kirton, *Ohio Chapter*
Harold A. Levey, *Louisiana Chapter*
John H. Nair, *At-Large*
Emil Ott, *At-Large*
Donald Price, *At-Large*
Paul E. Reichardt, *Washington Chapter*
M. Sittenfield, *Pennsylvania Chapter*
W. J. Sparks, *At-Large*
Charles L. Thomas, *At-Large*
R. W. Truesdail, *Western Chapter*
Florence E. Wall, *At-Large*
Albin H. Warth, *Baltimore Chapter*
L. T. Work, *Past President*

October Meeting

The 281st meeting of the AIC National Council was held Oct. 27, 1954, at 6:00 p.m. at The Chemists' Club, New York 17, N.Y. President Donald B. Keyes, presided. The following officers and councilors were present: C. C. Concannon, A. W. Fisher, K. M. Herstein, F. A. Hessel, D. B. Keyes, J. H. Nair, W. J. Sparks, L. Van Doren, and L. T. Work. L. T. Eby, chairman of the Membership Committee; M. J. Kelley, chairman of the Committee on Manual of Chapter Operations; J. A. Behnke, associate administrative secretary of the AAAS, and V. F. Kimball were present.

The Treasurer's report was accepted.

The Secretary reported that we have a total of 2750 members. He announced with deep regret the deaths of the following persons, about which we were informed since the preceding meeting of the Council:

R. F. Bacon, F.A.I.C., Oct. 14, 1954
N. L. Dodge, F.A.I.C., April 12, 1954
D. Fishkind, F.A.I.C., Sept. 28, 1954
Dr. M. Neidle, F.A.I.C., July 4, 1954
A. M. Pedersen, F.A.I.C., June 22, 1954
C. F. Roth, F.A.I.C., June 24, 1954
Dr. N. Sulzberger, F.A.I.C., June 7, 1954
Dr. John Xan, F.A.I.C., Aug. 12, 1954
Dr. W. L. Evans, Hon. AIC, Oct. 18, 1954

The Council observed a moment of silence in their honor.

An invitation from the University of Buffalo to appoint a delegate to the inauguration of Dr. C. C. Furnas as chancel-

lor was accepted. Dr. Hans Kauffman was appointed to be delegate.

The matter of affiliation with the American Association for the Advancement of Science was presented. Dr. Van Doren, chairman of the committee to consider this matter, reported that a majority of the committee was in favor. Mr. Behnke, associate administrative secretary of the AAAS, discussed what an affiliation would mean and what the Association is now trying to do. If association with the AAAS is not satisfactory, the affiliating organization may withdraw at any time. Upon motion, the secretary was requested to apply for affiliation.

A letter from Nicholas A. Opolonick, concerning the Civil Service Commission of the State of New York, was referred to Mr. Herstein, Council representative from the New York Chapter. A letter seeking speakers for Student Science Clubs in New York was also referred to Mr. Herstein.

A letter from Benjamin Sweedler, chairman of the Committee on Constitutional Revision was read, in connection with further revisions to the Constitution, and referred to the next meeting.

The revisions to the By-laws were presented for the second time, in conformance to the requirements for amnding By-laws, and upon motion, were adopted.

A vote of thanks was extended to Mr. Sweedler for the excellent work he has done as chairman of the Committee on Constitution and By-laws.

The secretary announced that the Manual on Chapter Operations would soon be available to chapter officers.

The program for the 1955 Annual Meeting was considered, and it was agreed, in compliance with a request from the Chicago Chapter, to hold the Gold Medal Banquet on the evening of the second day, May 12, 1955, in order to make the third day, Friday, May 13th, conclude in the afternoon following the Honorary Recipients' Luncheon. This will enable persons taking trains or planes to the East to obtain the best service.

Mr. Herstein reported that on Jan. 20th, Honorary Membership will be presented to Dr. M. C. Whitaker, F.A.I.C., at a meeting sponsored by the Chapter, at the Hotel Commodore, New York, N.Y. Mr. Concannon stated that the Washington Chapter was holding luncheon meetings regularly.

Dr. Fisher announced that the New England Chapter has elected the following new officers: Chairman, Walter R. Smith; Vice-chairman, Richard S. Robinson; Secretary-Treasurer, George B. Walter, Jr., and National Council Representative, Dr. A. W. Fisher.

Dr. Keyes invited AIC members to attend the December second, afternoon session, of the Congress of American Industry, to hear a panel on "Power for the Future."

Mr. Concannon submitted his resignation as a member of the National Council, because of press of work and inability to attend future meetings. Upon motion, his resignation was accepted with deep regret.

In accordance with Article III, Sec. 4, of the By-laws, the Council appointed Florence E. Wall, who was in fourth place on the election ballot this spring, to serve as councilor to complete the term of Mr. Concannon, which expires in May, 1955.

The following new members were elected:

FELLOWS

Arrow, Herman
Chemist, U. S. Treasury, 201 Varick Street, New York, N. Y.

Dulkin, Dr. S. I.
Owner, Chem-Tech Labs., 236½ S. Robertson Blvd., Beverly Hills, Calif.

Kastens, Merritt Louis
Assistant Director, Stanford Research Institute, Stanford, Calif.

Kenigsberg, Morris
Research Supervisor, The Toni Co., 332

Lobstein, Dr. Otto E.
Owner, Chem-Tech Labs., 236½ S. Rosabel St., St. Paul 1., Minn.
Robertson Blvd., Beverly Hills, Calif.

Robinson, John Cutler, Jr.
Personnel Manager, Experiment Sta. (Res. Dept.) Hercules Powder Co., Wilmington, Delaware.

Schnopper, Isidore
Chief, Bureau of Customs, U. S. Customs Lab., 201 Varick St., New York, N. Y.

MEMBERS

Craig, Jack Lawrence
Staff Member, Dev. Dept., Spencer Chemical Co., 500 Fifth Ave., New York, N. Y.

Johnson, Harold Arthur
Chemist, Mines Experiment Sta., Univ. of Minnesota, Minneapolis, Minn.

ASSOCIATES

Rago, William John
Miner Labs., 9 South Clinton Street, Chicago, Illinois.

LIFE MEMBER

Hersh, Dr. Joseph M.
Cities Service Research & Development Co., Inc., P. O. Box 309, Camden, N.J.

COMMERCIAL CHEMICAL DEVELOPMENT

Surveys. Technical and Economic Evaluations. Application Research. Operating Cost Studies. Financial Reports. Profit Estimates. Recommendations for Acquisitions and Expansions.

R. S. ARIES
AND ASSOCIATES
CONSULTANTS
TO THE CHEMICAL INDUSTRIES
New Products and Processes
Complete Technical and
Economic Services
270 Park Ave., N. Y. 17
ELdorado 5-1430

AIC Activities

C. P. Neidig, F.A.I.C.

Chicago Chapter

Chairman, Dr. Lloyd A. Hall
Chairman-elect, Clifford A. Hampel
Vice-Chairman, Dr. Harold M. Coleman
Secretary, John Krc, Jr.
Armour Research Foundation,
Technology Center,
10 West 35th St.,
Chicago 16, Ill.
Treasurer, Albert S. Henick
National Council Representative:
Dr. Gustav Egloff

Stimulating Creativity

Stimulating Creativity will be the theme of a discussion by Dr. Emil Ott, F.A.I.C., director of research, Hercules Powder Company, at the January 7th meeting of the Chicago Chapter, at the Chicago Engineers Club. Dr. Ott feels that all chemists possess innate talents for creative thinking and performance. While these talents vary in degree with the individual, all chemists can learn how to develop and exploit them and thus improve their position in life. Likewise, management can do much to help the individual. But what are the ways and means toward this end? How shall creativity be rewarded? Will sub-professional help free the chemist so that he can be creative — or will he pawn off his work on the helper and become a non-productive daydreamer? Perhaps stimulation of creativity should begin earlier. Children are creative as well as destructive, but do their parents encourage the former? Dr. Ott will offer sound approaches to the subject that can be invaluable both to the employee and to management.

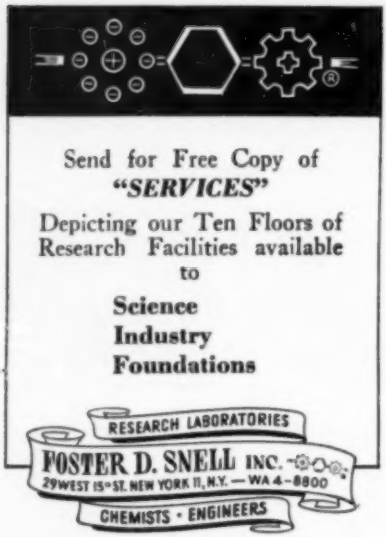
Louisiana Chapter

Chairman, Dr. Carl M. Conrad
Chairman-elect, C. L. Hoffpauir
Secretary-Treasurer, Hartwig A. Schuyten
National Council Representative:
Harold A. Levey, Sr.

In addition to the above officers for 1955, the Chapter also appointed the following standing committees: Membership: Mark F. Stansbury, chairman; Program: C. L. Hoffpauir, chairman; Awards: Paul F. Bailey; Archives: Harold A. Levey, Sr., chairman; Education: J. David Reid, chairman; Publicity: Dr. Winston R. deMonsabert, chairman.

New York Chapter

Chairman, John Kotrady
Vice-chairman, Jack Dollinger
Secretary-Treasurer, Richard L. Moore
Foster D. Snell, Inc.
29 West 15th St.,
New York 11, N. Y.
National Council Representative:
Karl M. Herstein



Speed Reading Paper Available

The New York AIC Chapter met at a joint meeting with the New York Section of the American Chemical Society, December 2, 1954, at the Carbide Cafeteria, New York, N. Y., to hear Allen Sack, director of the Speed Reading Institute, speak on, and demonstrate, speed reading. The audience participated in a test of rate of reading speed and comprehension. Preprints of Mr. Sach's paper on the subject are available, without charge, from John Kotrady, The Texas Co., 135 E. 42nd St., New York 17, N. Y.

Western Chapter

Chairman, Dr. Kenneth W. Newman
Chairman-elect, Thomas J. Rollins
Vice Chairman, Gerald I. Gruber
Treasurer, Dr. Frederick G. Sawyer
Co-secretaries, Alfred J. Webber,
Braun Corp.,
2260 E. 15th St.,
Los Angeles 21, Calif.
Thomas J. Kehoe,
4301 Yosemite Way,
Los Angeles 65, Calif.
National Council Representative:
Dr. Roger W. Truesdail

Forensic Chemistry

Lieutenant Leland V. Jones ("Lee Jones of the Crime Lab." in "Dragnet.") of the Los Angeles Police Department will address the Chapter and show slides taken from actual police records, at the December 14th meeting, to be held at Rudi's Italian Inn, Los Angeles, Calif.

New England Chapter

Chairman, Dr. Walter R. Smith
Vice Chairman, Richard S. Robinson
Secretary-Treasurer,
George B. Walker, Jr.,
Arthur D. Little, Inc.
30 Memorial Drive,
Cambridge, Mass.
National Council Representative:
Dr. Austin W. Fisher, Jr.

New Officers

The New England Chapter announces that the officers listed above have been appointed for the current year.

Washington Chapter

President, Paul E. Reichardt
Vice-President, Dr. Frank Gonet
Secretary, T. Allen Davis
1016 Urell Place, N.E.
Washington 17, D. C.
Treasurer, Albert F. Parks
National Council Representative:
Paul E. Reichardt

November Meeting

The Washington Chapter met Nov. 9th at luncheon at O'Donnells Restaurant, Washington, D. C. Chairman W. R. Koster announced that the 1954 Honor Award would be made to Dr. Eduard Farber, F.A.I.C., on December 7th at a dinner at the Olmsted Restaurant.

Carl G. Morrison, director of the Chemical & Rubber Division, BDSA, Department of Commerce, spoke on "Industrial Personnel Recruiting." Since Mr. Morrison is on loan to the government for a six-months period on a WOC basis, from the Enjay Corporation, he presented his remarks on the basis of many years of experience. He covered the numerous facets of the continuing industrial problem of finding personnel for growing companies, with adequate training, suitable personalities, willing and able to become effec-

tive members of an industrial enterprise. He described modern methods of evaluating persons after hiring, the training methods, and the system of rotating staff and executive members of the organization in different types of positions.

Will You Come

Dec. 2, 1954. Pennsylvania Chapter. Award of the Chapter's Honor Scroll to Dr. Arthur Osol, director, Chemistry Department, Philadelphia College of Pharmacy and Science. Reception and dinner at the Penn Sherwood Hotel, Philadelphia, Pa.

Dec. 2, 1954. New York Chapter jointly with New York Section of the American Chemical Society. Carbide Cafeteria, 30 E. 42nd St., New York 17, N. Y. Dinner 5:45. Speaker, Allen Sack, Associate Director, Speed Reading Institude, "Speed Reading." Everyone present will participate in a speed reading demonstration. Question and answer period. Presiding chairman, John Kotrady.

Dec. 7, 1954. Washington Chapter. Dinner meeting, Olmsted Restaurant, Washington, D.C. Award of the 1954 Honor Award to Dr. Eduard Farber, F.A.I.C., chief chemist, Timber Engineering Company.

Dec. 14, 1954. Wastern Chapter. Dinner meeting, Rudi's Italian Inn, Los Angeles, Calif. Speaker, Lt. Leland V. Jones of the Los Angeles Police Dept. on "Modern Crime Detection."

Dec. 15, 1954. National AIC Council and Board of Directors. The Chemists' Club, 52 East 41st St., New York 17, N. Y. Dinner 6:00 p.m.

Jan. 7, 1955. Chicago Chapter. Dinner meeting. Chicago Engineers Club, 314 S. Federal St., Chicago, Ill. 6 p.m. Speaker, Dr. Emil Ott, F.A.I.C., "Stimulating Creativity." Reservations: R. L. Bond, CAbany 5-9600, Ext. 676.

Jan. 20, 1955. New York Chapter. East Ballroom, Hotel Commodore, 42nd St. & Lexington Ave., New York 17, N. Y. 6:00-7:00 p.m. Reception, Grand Foyer of East Ballroom, courtesy American Cyanamid Company. 7:00-8:00 p.m. Dinner. Informal. Honorary Chairman, Dr. Wallace P. Cohoe. Toastmaster, John Kotrady. Introduction, Dr. Robert C. Swain. Presentation of Honorary AIC Membership to Dr. Milton C. Whitaker, retired vice-president, American Cyanamid Co., Dr. Donald B. Keyes. Honor Recipient's Address, Dr. Milton C. Whitaker. Reservations: (Dinner $8.00) Shepherd Stigman, Foster D. Snell, Inc., 29 W. 15th St., New York 11, N. Y.

Feb. 4, 1955. Pennsylvania Chapter. Speaker, Dr. John Bockris of the University of Pennsylvania, "The Chemical Profession in England." For details: Robert Kunin, Rohm & Haas Co., Washington Square, Philadelphia 5, Pa.

Feb. 9, 1955. National AIC Council and Board of Directors. The Chemists' Club, 52 East 41st St., New York 17, N. Y. Dinner 6:00 p.m.

Feb. 24, 1955. New York Chapter. The New York Times Dining Room, 229 W. 43rd St., New York, N. Y. Dinner 6:00 p.m. Speaker: Dr. Randolph Major. Subject: "Advancing Yourself in Chemistry in the Pharmaceutical and Medical Fields." Question and answer period. Presiding Chairman, John Kotrady. Reservations ($2.75), Shepherd Stigman, Foster D. Snell, Inc., 29 W. 15th St., New York 11, N. Y.

Dr. Farber Honored

Dr. Eduard Farber, F.A.I.C., Chief chemist of the Timber Engineering Company, was selected to receive the Washington Chapter's 1954 Honor Award, at its December 7th meeting.

Dr. Farber has distinguished himself in the fields of wood chemistry and the chemical utilization of wood. He has contributed greatly to the study of the history of chemistry. He is a past president of the Washington AIC Chapter, and has demonstrated his deep interest in the professional status of chemists.

Dr. Osol Honored

The 1954 Honor Scroll of Pennsylvania Chapter was awarded to Dr. Arthur Osol, professor of analytical and physical chemistry and director of the Department of Chemistry at Philadelphia College of Pharmacy and Science.

Dr. Osol started his professional career with appointment to Philadelphia College of Pharmacy and Science in 1928. Besides his teaching assignments he has engaged in many professional and civic assignments, as consultant, as editor-in-chief of the *United States Dispensatory* and other books, and as a member of the Science Advisory Committee of the Federal Smaller War Plants Corporation.

April 7, 1955. Pennsylvania Chapter. Informal social evening. Refreshments and entertainment. For information: Robert Kunin, Rohm & Haas Co., Washington Square, Philadelphia 5, Pa.

April 13, 1955. National AIC Council and Board of Directors. The Chemists' Club, 52 East 41st St., New York 17, N. Y. Dinner 6:00 p.m.

April 15, 1955. Ohio Chapter. Annual Meeting. Mayflower Hotel, Akron, Ohio.

Apr. 28, 1955. New York Chapter. The New York Times Dining Room, 229 W. 43rd St., New York, N. Y. Dinner 6:00-7:30 p.m. Presentation of Awards to Student Medalists. Speaker Dr. A. W. Fisher, Jr., Arthur D. Little, Inc., "Algæ as a Potential Future Source of Food." Question and answer period. Presiding chairman, John Kotrady. Reservations ($2.75), Shepherd Stigman, Foster D. Snell, Inc., 29 W. 15th St., New York 11, N. Y.

May 5, 1955. Pennsylvania Chapter. Student Award Meeting.

May 11, 1955. National AIC Council and Board of Directors. The LaSalle Hotel, Chicago, Ill. Dinner 6:00 p.m.

May 11, 12, 13, 1955. AIC Annual Meeting. LaSalle Hotel, Chicago 2, Ill.

ROBINETTE RESEARCH LABORATORIES, INC.

Industrial Research -:- Consultation
Technical and Economic Surveys
Product Development
Chemical Market Research

16 East Lancaster Avenue
Ardmore, Pa. Tel. Midway 2-6457

Opportunities

Doris Eager, M.A.I.C.

AIC members who are seeking positions may place notices in this column without charge.

Chemists Available

Research Administrator. Ph.D. Physical chemistry, 1949. Management background and personality. Excellent record. Age 32, family. Box 120, THE CHEMIST.

Organic Chemist, Ph. D. Sixteen years research and development experience, eight years as supervisor in industrial organic chemistry. Responsible for two important new developments in past ten years. Family. Box 122, THE CHEMIST.

Colloid Chemist, F.A.I.C. Competent scientist and administrator. Emulsions, waxes, surfactants, resins, insecticides, rheology. Seeks responsible position in small firm. Box 124. THE CHEMIST.

Technical Administrator. Chemist. 14 years experience in manufacture of organic chemicals and agricultural specialties. Ten years experience at management level as director of product development and director of research. Desires administrative position in product or market development division of expanding company. Box 126, THE CHEMIST.

Chemical Director. Broad up-to-date knowledge of new materials for product formulations. Experience covers many fields. Highly skilled in packaging design, labels and labeling claims. Box 128, THE CHEMIST.

Positions Available

Manager of Photographic Research. Ph.D. in physical or organic chemistry. Minimum of 15 years industrial experience in field, to include proven achievement in development of commercially useful photographic emulsions for paper and film sensitizing. To 45. Salary around $15,000. Mid New York State. Box 121, THE CHEMIST.

Chemical Engineer. Seven to 12 years experience; research, processing, consulting and direct production in processing and large-volume chemicals, such as sulfuric acid, phosphates, silicates, potash, nitric acid. Mid West. To 35. Salary $8,500 or better. Box 123, THE CHEMIST.

Civil Service. No. 0051 Food Chemist, salary $4,130-$5,200. Details from N. Y. State Dept. of Civil Service, Albany or Buffalo, or 270 Broadway, N. Y. 7, N.Y.

Chemists. Bachelor's or advanced degree for research in inorganic, physical, and radiochemistry. Research experience is desirable.

Salesman. Science degree, with technical sales experience. To sell wide range of nuclear instruments and equipment. Must be willing to relocate.

The two preceding positions open in New England, salary dependent upon qualifications. Box 125, THE CHEMIST.

Chemist. Well grounded in organic chemistry. Good appearance and personality. Must be adaptable for position offering diversified duties. Knowledge of high polymers helpful. Under 30. Mid New York State. Salary $6,000 or better. Box 127, THE CHEMIST.

The following positions are open in the metropolitan New York area:

Ph.D. biochemistry (1) 2-4 yrs. exp. Specific training in colloid and physical chemistry $7-8,000. (2) Nutrition or M.S. (4 yrs. exp.) interested in nutritional research $5,000-6,500. Box 129, THE CHEMIST.

Ph.D. (3 yrs. exp.); **B.S.** (5 yrs. exp.) **Project leader,** fats, flavor stability and synthetic preparation. Thorough training in synthetic chemistry. $6,500-8,000. Box 1201, THE CHEMIST.

THE LENTO PRESS

Distinctive Printing

441 Pearl Street New York, N. Y.

WOrth 2-5977

Ph.D. (2 yrs. exp.); **B.S.** (5 yrs. exp.) Starch or protein chemistry. Supervisory and planning experience. $6,500-8,000. Box 1203, THE CHEMIST.

Ph.D. physical chemistry, 3 yrs. exp. Rheology, gels, edible polymers. $6,500-8,000. Box 1205, THE CHEMIST.

Ph.D. (2 yrs. exp.); **B.S.** (6 yrs. exp.) Food Technology or Agricultural Chemistry. Applied research, pharmaceuticals, food processing. Able to plan, organize and execute research. $6,500-8,000. Box 1207, THE CHEMIST.

Ph.D.; B.S. (3 yrs. exp.), physical chemistry or carbohydrate chemistry. $5,200-6,500. Box 1209, THE CHEMIST.

M.S. (2 yrs. exp.); **B.S.** (5 yrs. exp.), training and experience in spectroscopy, electrophoreis, applied physical chemistry. $6,500-8,000. Box 1211, THE CHEMIST.

B.S. Chemistry (several). Good academic records. Major in biochemistry, colloid or agricultural chemistry, food technology or chemical engineering. $4,000-4,500. Box 1213, THE CHEMIST.

For Your Library

Nobel Prize Winners in Chemistry

By Dr. Eduard Farber, F.A.I.C. Henry Schuman. 219 *pp.* 6" *x* 8½". $5.00

This book by Dr. Farber is a delightful book of light reading that effectively caters to the tastes of sages or laymen.

It combines biography and scientific exposition. Biography always interests people and rewards any reader. Science can be deep or readily understandable. Dr. Farber gives both kinds, but not enough to weigh down the average person.

The first fifty years of Nobel winners in chemistry, beginning with the initial award in 1901 to van't Hoff, and ending with the 1950 honor to Diels and Adler, embrace the scope of the volume. Each award receives uniform treatment under the headings of Biographical Sketch, Description of the Prize-Winning Work, and Consequences in Theory and Practice. The compactness of presentation is shown by the fact that 51 chemists are covered in slightly more than 200 pages. The seven barren years, when the Nobel Committee of the Royal Swedish Academy of Science made no awards, are somewhat more than compensated by the multiple honors of other years.

The world's highest distinction in chemistry rests upon a process of elimination, from the many nominees offered annually, down to the individual winner. Something outstanding has to come from the mind and hand of each laureate. We read in this work just what arresting contribution to the progress of chemical knowledge each made. We read the story, in the winner's own words, of the achievement that earned the prize. This is thrilling reading, for drama mingles with abstract considerations in the accounts presented by more than one recipient. That drama enters is true to life, for emotions do build up in chemists when a hard-sought or unexpected phenomenon rewards the diligent and appreciative worker. Read Moissan's narrative (to mention but one) on synthetic diamonds, to feel the wonder of how man successfully competes with nature in a difficult feat.

Much of the material in this work represents scientific knowledge that most of us have read and should know, but perhaps we have partly forgotten. One of the values in this book is in the refresher course furnished with each chapter. Whether for this or just enjoyment of reading about famous people and their works, the book can be recommended to everyone who takes an interest in the world about him. Photographs of the distinguished company add to the text. There are complete indexes by name and subject. —L. N. MARKWOOD, F.A.I.C.

TRUESDAIL LABORATORIES, INC.
• Applied Research & Development
• Consultation — Analyses
• Environmental & Mechanical Testing
CHEMISTS · BACTERIOLOGISTS ENGINEERS
Write for Brochure • 4101 N. Figueroa St. Los Angeles 65, Calif. • CApitol 4148

Bibliography on Research Administration

By George P. Bush. University Press of Washington, D. C. 1954. *VI* -- 146 *pp.* 6" x 9". $4.00.

This little book covers the subject of research thoroughly in its eight chapters of briefly annotated bibliographies together with its index of authors and its topical index. The literature covered is principally American but also included are references to articles published elsewhere in English. Practically this is a thorough literature search on the subject of research copiously and thoughtfully annotated and indexed. Invaluable to anyone writing about research.

—D. H. KILLEFFER, F.A.I.C.

The Microphysical World

By William Wilson, Philosophical Library. 1954. *vii* - - 216 *pp.* $3.75

Under this modest title is an entertaining account of particle physics and chemistry for the intelligent layman by an author who is himself a pioneer, contemporary with Sommerfeld, in the subject of orbital electrons. His referencing is generous to his fellow-countrymen without obvious slighting of other nationalities. Thus after describing the cloud and droplet methods of determining the charge on an electron, he writes:

"It is not inappropriate to close this very brief account of the measurement of the very important constant, e, by pointing out that the main features in the methods just described are all to be found in the brilliant pioneer work of Sir John Townsend."

Chemists share the honors next to physicists in the booklet, although the work of astronomers, mathematicians, and even physicians, is not neglected. Although designed to serve "as an introduction and, perhaps, as an incitement to the more serious study of physical science," let no one be deceived by this understatement. It is a contemporarily authentic statement of the science of nucleonics, in pocket-size edition.

—Dr. E. E. Butterfield, F.A.I.C.

Chemical Books Abroad

Rudolph Seiden, F.A.I.C.

George Westermann Verlag, Braunschweig: *Rechnen im Labor,* by Heinrich Kruhme; 1954, 142 pp. (60 ill.). — In 184 examples and 834 problems (with solutions) are all the calculations explained which any chemist may have to make in laboratory or research work. The logical arrangement and interesting presentation of the subject matter greatly facilitate its understanding.

Verlag Dr. Dietrich Steinkopff, Darmstadt: *Einfuehrung in die Ultrarotspektroskopie,* by Werner Bruegel; 1954, 366 pp. (140 ill.); paper covers, DM-46. — An introduction to infrared spectroscopy: theory, equipment, sample preparation, analytical techniques, practical applications, and 595 literature references.

The Tintometer Ltd., Salisbury (Curry & Paxton, New York 17, N. Y.): *A Handbook of Colorimetric Chemical Analytical Methods;* 2nd ed., 206 pp.; $5. — Various Lovibond comparators and the B. D. H. Lovibond Nessleriser are versatile instruments; detailed technical instruments for their use and colorimetric method for the determination of pH, for making qualitative analyses, grading tests of industrial materials, clinical-chemical tests and for estimating toxic gases are collected in this volume. • *Chemical Tissue Tests for Determining the Mineral Status of Plants in the Field,* by D. J. D. Nicholas; 1953, 33 pp.; $3. — Simple methods for the semi-quantitative determination of N, P, K, Cl, Mg, Ca, Mn, Al, Co, Zn, Fe, Ni, Ld and heavy metals in general in plant material, by means on the Lovibond comparator, are described. • *The C. I. E. International Colour System Explained,* by G. J. Chamberlin; 1951, 34 pp.; paper covers, $1.75. — An explanation of the C. I. E. (Commission Internationale de l'Eclairage) system for describing any color by explaining its position within the color triangle with the help of 2 coordinates and the photometric brightness (or factor %). • Other pamphlets, all by A. J. Fawcett (at 50 cents each), are entitled *Colour and the Visual Measurement of Colour* (52 pp.); *Electric Eyes* (28 pp.); *A Plain Talk on Colour Measurement* (8 pp.); and *Colorimetry* (Parts 1 and 2).

NOW OVER 5100
BIOS CHEMICALS

- ALUMINUM TELLURIDE
- ALUMINUM TUNGSTATE
- p-AMINOETHYLBENZENE
- AMINUFUMARAMIDE
- AMINOMALONIC ACID
- 2-AMINOPHENAZINE
- p-AMINOSALICYLURIC ACID
- o-AMINOTHIOPHENOL
- AMMELLID
- AMMELLIN
- AMMONIUM GENTISATE
- AMMONIUM FLUOZIRCONATE
- AMMONIUM HIPPURATE
- AMMONIUM IODATE
- AMMONIUM VALERATE

Ask for our new complete catalogue.

BIOS Laboratories, Inc.
17 West 60th St. New York 23, N. Y.
PLaza 7-8171

Appointed: As technical representative for Foster D. Snell, Inc., New York 11, N. Y., in British Columbia, Canada, John P. Baird Jones, 627 Vancouver Block, Vancouver, B.C.

RARE CHEMICALS

iso-Amyl Nitrate Silicon Nitride
n-Amyl Nitrate n-Propyl Nitrate
n-Butyl Nitrate Phosphorus Nitride
Tetranitromethane

O. JOHNSON & E. SCUDDER
92 ORCHARD STREET
Bloomfield, N. J.

Federal Funds: For research and development activities in science will be about $1,990,000,000, in the fiscal year 1955, about 10 per cent less than the $2,230,000,000 obligated in 1954, according to the report, *Federal Funds for Science, III. The Federal Research and Development Budget, Fiscal Years* 1953, 1954, *and* 1955, issued by the National Science Foundation, Washington 25, D.C. The major decreases occurred in obligations for research and development plant and facilities. Copies of the report may be obtained from the Superintendent of Documents, Washington 25, D.C., for thirty cents each.

The Pittsburgh Conference: On Analytical Chemistry and Applied Spectroscopy will be held at the William Penn Hotel, Pittsburgh, Pa., Feb. 28 to Mar. 4, 1955. The Analytical Chemistry Group of the Pittsburgh Section of the American Chemical Society and the Spectroscopy Society of Pittsburgh are cohosts.

High School Science: Is suffering from lack of teachers, said Dr. Howard A. Meyerhoff, executive director of the Scientific Manpower Commission, at the Edison Foundation meeting, October 18th, and "in five years there has been a 50 per cent drop in the number of teachers certified to teach science, the figure reaching 75 per cent in physics . . . Physics is moving out of the secondary schools, not for lack of student interest but for lack of good teaching." Dr. M. H. Trytten, director of the Office of Scientific Personnel, National Academy of Sciences, speaking on the same subject, deplored the evidence that "we seem to be deemphasizing science in our schools rather than giving it a place commensurate with its importance in our lives." He called for a scrutiny of the secondary school system and stated that this important link in our educational system calls for extensive reorientation and reconstruction.

Exhibition: ACHEMA XI, will be held in Frankfurt am Main, Germany, May 14-22, 1955, sponsored by the Deutsche Gesellschaft fuer Chemisches Apparatewesen. Additional information, including floor plans and regulations (in English) may be obtained from the Chicago Section of the American Chemical Society, 86 E. Randolph St., Chicago 1, Ill.

The Chemical Nickel-Plating Process

The largest capacity plant for the commercial application of chemical nickel-plating, located at Dunkirk, N. Y., was shown to the press recently by the American Locomotive Company. The chemical nickel-plating process, called ALCOPLATE, was being used in a continuous-flow, closed-cycle system to coat (3 mils thick) the inside of converters for the Atomic Energy Commission. An immersion system was also being used for both internal and external coating of uneven sized vessels, and for selective plating of product parts, valves, and pipes. During the first three months of the ALCOPLATE operation, ALCO has nickel-plated some 200,000 mil square feet (67,000 sq. ft. of surface plated .003 in. thick) of AEC equipment.

The process is an economical method of nickel-plating which applies a superior protective surface consisting of 93 per cent nickel and 7 per cent phosphorus alloys, in uniform thickness upon metallic industrial products of various sizes or shapes. The plating is deposited evenly on any surface where water can flow, including threaded parts or gear teeth. Zero porosity is guaranteed. The bond with the base metal is intermolecular. The coating hardness averages 500 Vickers or 49 Rockwell C and can be increased by post-plating treatment to 950 Vickers or 63 Rockwell C. Scarce nickel is conserved by the process, since as good protection can be achieved by a thinner coating than is required in the electrolytic method.

The components of the nickel-plating bath were given as nickel sulphate, sodium hyposulphite, aliphatic dicarboxylic acids, caustic, and water, kept at a pH of 4.6. The brilliantly green bath circulates through glass piping and glass-lined heaters, make-up, surge and regeneration, tanks, pumps, and evaporators. The plating is done in a temperature of 207° F. Cooling devices then bring the spent solution down to 135° F to be filtered, replenished and reheated, automatically.

ALCO has built two modern laboratories to conduct chemical analysis, micro and macro analysis, and physical testing. Equipment includes heat treating facilities, modern machine tools for preparing specimens, and delicate instruments for conducting necessary research and quality control tests.

The first process for chemically coating nickel on metal was discovered in 1844. Since 1916, when a

MOLNAR LABORATORIES

Organic Process Development, Control Laboratory and Pilot Plant Studies

Your Inquiries Invited

211 E. 19th St. New York 3, New York

Telephone: GRamercy 5-1030

U.S. patent was issued to Roux, the U.S. Bureau of Standards has pioneered the field. In recent years, patents have been issued to G. Gutzeit and others in General American Transportation Corp., which holds most of the patents. This company announced the Kanigen process in 1953, defined as "chemical deposition of a high-nickel, low phosphorus alloy and the coating resulting therefrom." Kanigen, a registered trademark, is derived from CAtalytic NIckel GENeration. General American gave its first license to Keystone Chromium Co. of Buffalo, an ALCO subcontractor. The second license was granted in May, 1954, to ALCO.

Warnings: Being given to persons in southwestern Utah and southern Nevada, by the Atomic Energy Commission, that the Nevada Proving Ground is being prepared for a series of atomic tests to be held probably about mid-February, 1955.

Symposium: On National Air Pollution, to be held April 18-19, 1955, at the Huntington-Sheraton Hotel, Pasadena, Calif. General chairman is Dr. A. M. Zarem, manager, Stanford Research Institute's Los Angeles Division.

Established: By Stanford Research Institute, Stanford, Calif., a project office with resident staff in Honolulu, Hawaii.

PHOENIX

CHEMICAL LABORATORY, INC.

Specialists in Petroleum Products
Chemical Tests • Physical Tests
Qualification Tests

3953 Shakespeare Avenue
CHICAGO 47, ILL.

New Office: Opened by Arthur D. Little, Inc., of Cambridge, Mass., at 114 Sansome St., San Francisco 4, Calif. Charles G. Harford is technical director of this "Western Laboratories Division."

Now Being Compiled: The tenth edition of *Industrial Research Laboratories of the United States,* a directory of industries and business which maintain scientific research and development facilities, by the National Academy of Sciences-National Research Council. Industrial laboratories that may wish to be included in the directory but have not received a questionnaire may do so by writing to James F. Mauk, Staff Associate, National Academy of Sciences — National Research Council, 2101 Constitution Ave., N.W., Washington 25, D.C.

New Plant Planned: By Acheson Industries, Inc., 420 Lexington Ave., New York 17, N. Y., for the manufacture of dispersed pigments and carbon black, at Orange, Texas.

New Laboratory: Planned by J. T. Baker Chemical Co., adjacent to its main plant in Phillipsburg, N. J. This is part of the expanded research and development program of the company, which is celebrating its fiftieth year in the manufacture of purity chemicals.

Fellowships: For graduate and postdoctoral work are being offered for 1955-1956 by the National Science Foundation. For information, The Fellowship Office, National Research Council, 2101 Constitution Ave., N.W., Washington 25, D.C.

Dedicated: The new Columbus, Mississippi, plant of the Oldbury Electro-Chemical Company, October 26, 1954, for the production of sodium chlorate. Under construction for two years the plant cost almost four million dollars. Phosphorus pentasulphide will also be manufactured as soon as facilities are completed.

Conference: To be held on plant maintenance and engineering, at the International Amphitheatre, Chicago, January 24-26, 1955. Advance registration cards may be obtained from Clapp & Poliak, Inc., 341 Madison Ave., New York 17, N. Y.

Changed: The name of American Car and Foundry Company to A C F Industries, Inc., at 30 Church St., New York, N. Y.

EVANS
RESEARCH & DEVELOPMENT
CORPORATION
Organic and Inorganic Chemistry
Processes — Products
Unusually Extensive Facilities
Your Inspection Invited
250 East 43rd St., New York 17, N. Y.

Created: A General Committee on Nuclear Engineering and Science, under the sponsorship of Engineers Joint Council, 29 W. 39th St., New York, N. Y., to "meet the pressing problems of nuclear engineering and the related sciences, with emphasis on the industrial usefulness of atomic power." Dr. John R. Dunning, dean of engineering, Columbia University, has been elected chairman of the General Committee.

Promoted: Franklin H. Bivins, F.A.I.C., to the position of assistant to the executive vice president of Vitro Rare Metals Company of Canonsburg, Pa. He was formerly general manager.

Planned: An independent health research center to study the effects of chemicals on humans, by the Manufacturing Chemists' Association, Inc. A committee has been formed to study this and other proposed industry actions in the field of public health, according to an announcement by William C. Foster, president of the Association.

Condensates

Ed. F. Degering, F.A.I.C.

The radiation of polyethylene in the atomic pile results in cross-linking to give a new type of plastic which does not dissolve in organic compounds nor melt at 115°C.

New mehods of reproducing maps by engraving them on semi-rigid transparent plastic sheeting may speed up production by as much as 30 per cent as well as improve their quality.

A new National Oil Museum and Hall of Science has been chartered as a non-profit corporation to establish and maintain a museum in Tulsa, Okla. Plans are that the museum will house working models of refineries, oil wells, pipe lines, and other apparatus showing oil industry operations.

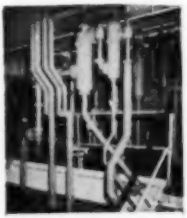
The use of an inositol-containing compound called Monichol (polysorbate 80-choline-inositol complex), according to reports from Fordham Hospital, has effected reduction in the serum cholesterol in 15 out of 16 patients treated.

A microgram analysis for hydrogen sulfide has been developed for the brewing industry. The method uses p-aminodimethylaniline and ferric chloride as the reagent.

We are going to need a lot of bright young men coming into business, according to president Crawford H. Greenewalt, F.A.I.C., of du Pont, if the rate of American progress is to continue, and the prestige of an executive career must be enhanced if it is to attract its share of available talent in the future.

LET C-R EVACTOR UNITS

help improve your health



This illustration shows two 4-stage EVACTOR units in the plant of a leading manufacturer of vitamins and other pharmaceuticals. The same plant uses numerous other C-R EVACTOR units of different types—as do the majority of manufacturers in this important field—for many different processes, including deodorizing, distilling, drying, refrigeration, etc. They are as simple as the valves that turn them on, yet maintain absolute pressures down to a small fraction of 1 m.m. absolute where steady, dependable vacuum is extremely important.

This steady, dependable vacuum is contributing to the improved health of our population by helping to supply purer and more potent vitamins, antibiotics and other pharmaceutical products. C-R also supplies Jet Mixers, Jet Heaters, Jet Absorbers, Jet Scrubbers, Jet Pumps, Jet Condensers and Barometric Condensers.

CROLL C-R REYNOLDS

Croll-Reynolds CO., INC.

MAIN OFFICE: 751 CENTRAL AVENUE, WESTFIELD, N. J.
NEW YORK OFFICE: 17 JOHN ST., NEW YORK 38, N. Y.
CHILL-VACTOR UNITS • EVACTOR STEAM JETS • CONDENSING EQUIPMENT

Something New

"Norelco Reporter." Publication available on request to North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.

"Mini-Lab Glass Apparatus for small-scale laboratory work." Brochure. Dept. ML-A. Ace Glass, Inc., Vineland, N. J.

"Nuclear Science Abstracts — New Nuclear Data 1952 Cumulation." (Catalog No. Ys. AT7:16/6-24B) 25-cents. Superintendent of Documents, Government Printing Office, Washington 25, D. C.

"Constant Temperature Circulator." Information. Bronwill Scientific, Inc., 45 Russell St., Rochester 7, N. Y.

"New Outlets for Wheat". A report on "Parboiled Wheat", practical solution to . . . food shortage in rice areas of world. Document No. 154. For information about obtaining it, inquire of Dr. Francis Joseph Weiss, F.A.I.C., 2000 - 37th St., N.W., Washington 7, D. C.

"Wip-Eeez." Non-woven cheesecloth industrial wipers. Information. The Leshner Corp., Hamilton, Ohio.

"Opportunities in Kansas for Industries." Survey by Midwest Research Institute. Request from Kansas Industrial Development Commission, 1025 Kansas Ave., Topeka, Kansas.

"Chemical Economics Handbook." Information about subjects and price may be obtained from Stanford Research Institute, Stanford, Calif.

"Big Enterprise in the Competitive System." Sound, Kodachrome film. 45-minutes. For information, Encyclopedia Britannica Films, Wilmette, Ill.

"New Dyeing & Finishing Chemicals." For information, Nopco National Co., Harrison, N. J.

"Impervite, Graphite Centrifugal Pumps." Information. John Roys, Falls Industries, Inc., 31905 Aurora Road, Solon, Ohio.

R. STECKLER LABORATORIES

8200 Harvard Ave. Cleveland 5, Ohio
BRoadway 1-4828

Research • Product Development
Consultation • Market Research
Product & Process Evaluation

SYNTHETIC RESINS, POLYMERS, COATINGS
Complete Resin, Polymer & Paint Laboratory

"Tools for Science." Catalog. Coleman Instruments, Inc., Maywood, Ill.

"Crane Fact Sheet." Prepared in commemoration of 100th birthday of Crane Co., 836 So. Michigan Ave., Chicago, Ill.

"Smooth-On Repair-Cements Handbook." 48-pp. Smooth-On Mfg. Co., 570 Communipaw Ave., Jersey City 4, N. J.

"High Pressure Acetylene Derivatives." Bulletin M-104 R. Commercial Development Dept., General Aniline & Film Corp., 435 Hudson St., New York 14, N. Y.

"New Metal Powders processed with Muriatic Acid to Electrify Liquid or Moist Materials." For information, Chemalloy Associates, Santee, Calif.

"Paper Strip Model Electrophoresis Apparatus," Bul. 115. "Kel-F Coated Magnetic Stirring Bars." Bul. 118. Arthur H. Thomas Co., P.O. Box 779, Philadelphia 5, Pa.

"Infiltrase, highly purified hyaluronidase from animal sources." Information. The Armour Labs., 520 No. Michigan Ave., Chicago 11, Ill.

"Hi-Ester Retention Process of Concentrating Orange Juice." Information, Golden Gift, Inc., De Land, Florida.

"Combination Colorimeter-Spectrophotometer." Catalog D-266. Bausch & Lomb, 635 St. Paul St., Rochester, N. Y.

"Custom-Made Glassware By Corning." Catalog CA-1, Special Apparatus Section, Laboratory & Pharmaceutical Sales Dept., Corning Glass Works, Corning, N. Y.

"25 SALESense Ideas." 4 pp booklet of ideas to make sales. Kelly-Read & Co., Inc., 508 St. Paul St., Rochester 5, N. Y.

"Prospecting with a Counter." AEC booklet describing use of radiation detection instruments. 30 cents per copy. Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

"Fisher Automatic Titrimeter." Information. Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.

"Electronic Controlled Laboratory Stirrer." Information. Ace Glass, Inc., Vineland, N. J.

"Fatty Acids, Glycerides, Sperm Oils, Fatty Alcohols." 40-pp technical catalog. Archer-Daniels-Midland Co., Chemical Products Div., 2191 West 110th St., Cleveland, Ohio.

"Seamless, Stainless Steel Pails." Information. Meyer Scientific Supply Co.,. 1672 62nd St., Brooklyn 4, N. Y.

"Spiral Rake Thickener." 12-pp bulletin, No. T5-B5. Denver Equipment Co., P.O. Box 5268, Denver 17, Colorado.

"Flame Proof Tank Light, Type EV-2375." Information. Crouse-Hinds Co., Wolf at 7th North Sts., Syracuse, N. Y.

"Covicone Protective Skin Cream for Industrial Workers." Information. Abbott Laboratories, North Chicago, Ill.

"Esters by Glyco." Catalog. Glyco Products Co., Inc., Brooklyn 1, N. Y.

"New Sugar Cane Wax for Emulsion Polish Industry." For information, Warwick Co., Subsidiary, Sun Chemical Corp., 10th St. & 44th Ave., Long Island City, N. Y.

"Fisher Gram-atic Balances." 8-page bulletin. FS-207, Fisher Scientific, 717 Forbes St., Pittsburgh 19, Pa.

"Flammable Liquid Trade Name Index." 82-pp. Booklet NFPA No. 325A. $1.25. National Fire Protection Association, 60 Batterymarch St., Boston 10, Mass.

"Synthetic Resins, Pentaerythritol, Plasticizers, Nonionics." Technical booklet. Hercules Powder Co., Wilmington, Del.

"Kel-Pak Powders, mixed chemicals for Kjeldahl nitrogen determinations." Information and samples. Laboratory Reagents, Inc., 3030 Main St., Kansas City, Missouri.

"Indulin." Pine wood lignin for removal & recovery of proteins and enzymes. Tech. Bul. 105. Polychemicals Div., West Virginia Pulp & Paper Co., Charleston A, South Carolina.

"Lanco Hot Plate-Magnetic Stirrer." Information. Arthur S. La Pine & Co., 6001 So. Knox Ave., Chicago 29, Ill.

"Vacuum Fusion Gas Analysis Apparatus, Model 912." Information. Naresco Equipment Corp., 160 Charlemont St., Newton Highlands 61, Mass.

"Brady All-Temperature Wire Markers." Information, W. H. Brady Co., 727 W. Glendale Ave., Milwaukee 12, Wis.

"Proceedings of 1954 Southern Industrial Wastes Conference." $2.50 per copy. Manufacturing Chemists' Association, Inc., 1625 Eye St., N. W., Washington 6, D.C.

"SRI Report on Los Angeles Smog." 134 pp. Director of Public Relations, Stanford Research Institute, Stanford, Calif.

"Calcium Chloride in Concrete." Manual CM-1. Calcium Chloride Institute, 909 Ring Bldg., Washington 6, D. C.

"Paper Electrophoresis System." Spinco Folder, Form 4R-554. Specialized Instruments Corp., 699 O'Neill Ave., Belmont, Calif.

"Portaflux, Magnetic-particle Test Unit." Bulletin. Research & Control Instruments Div., North American Philips Co., Inc., 750 S. Fulton Ave., Mount Vernon, N. Y.

Handling Hazardous Materials?

Send for this free book explaining

the **CBR** *System* for your laboratory

The C-B-R System—Chemical, Biological, Radiological—is Kewaunee's latest contribution to *safety, convenience, efficiency and economy* in the laboratory handling hazardous materials.

Based on the watchwords *"concentrate-confine"*, it provides vital protection to technicians and other laboratory personnel, whether the materials handled are in the field of isotopes, explosives, solvents or toxic materials. It provides remarkable flexibility and operating economy. It assures outstanding efficiency and convenience.

And it's all explained in the new free book "The CBR System by Kewaunee." So if your laboratory is handling hazardous materials of any kind, we invite you to send for this book today. It's yours for the asking—and there's no obligation.

The Kewaunee "CBR Twosome"

"Single Unit" for remote control

Kewaunee Mfg. Co.

J. A. Campbell, *President*

5057 S. Center Street • Adrian, Michigan

Representatives in Principal Cities

THIS FLEXIBLE PLASTIC TUBING IS STANDARD IN LABORATORIES EVERYWHERE

- it is glass clear
- it is non-toxic
- it is sterilizable
- it is chemically-resistant
- it is available in 58 sizes

at your favorite laboratory supply house

TYGON TUBING

a product of

THE U. S. STONEWARE CO.

Akron 9, Ohio

Plastics and Synthetics Division 164